Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Comparing the effectiveness of facilitated electric stimulation on two alternating patterns on lower extremity pelvic tilts in hemiplegic stroke patients

Protocol summary

Study aim

To find the effectiveness of facilitated electric stimulation of two alternating patterns (abdominals cross hamstrings and lower back muscles cross quadriceps) on lower extremity pelvic tilts in stroke patients.

Design

community based, parallel group, double blind, randomized controlled trial

Settings and conduct

Allied hospital Faisalabad, Sahil hospital Faisalabad, Aziz Fatima hospital Faisalabad, Maqsooda Zia hospital Faisalabad

Participants/Inclusion and exclusion criteria

Inclusion criteria • All men and women will be included in study. • Hemiplegic stroke patients will be included in study. 32 • Age between forty five to sixty years old will be included in study. • Patient with static and dynamic sitting balance will be included. • Patients with static standing balance will be included in this study. Exclusion criteria • All patients had imaging tests to rule out their diagnosis for stroke during the acute stage. • People who frequently have strokes. • People who have cerebellar, brain stem, or bilateral hemisphere lesions. • People who suffer from severe spasticity or cognitive impairment. • Patients with peripheral or orthopaedic neuropathy, substantial vision field defects, or hemi neglect issues were not included.

Intervention groups

both groups are interventional. Group A Abdominals cross Hamstrings and additional conventional exercises 3 days per week with 30 minutes. Additional conventional exercises will include lower limb joint mobilizations (including hips, knees, ankles and feet), stretching of lower extremity, and ROMS. Group B Lower back cross Quads and additional conventional exercises 3 days per week with 30 minutes stimulation each session.

Main outcome variables

Functional gait analysis Modified Ashworth scale Ranges of motion Pelvic tilts Carbon foot prints to measure cadence

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230716058795N1**
Registration date: **2023-09-17, 1402/06/26**
Registration timing: **retrospective**

Last update: **2023-09-17, 1402/06/26**
Update count: **0**

Registration date

2023-09-17, 1402/06/26

Registrant information

Name

Moater Iftikhar

Name of organization / entity

The university of Faisalabad

Country

Pakistan

Phone

+92 301 6085203

Email address

moaterhassankazmi@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-04-01, 1402/01/12

Expected recruitment end date

2023-06-30, 1402/04/09

Actual recruitment start date

2023-04-01, 1402/01/12

Actual recruitment end date

2023-06-30, 1402/04/09

Trial completion date

2023-07-06, 1402/04/15

Scientific title

Comparing the effectiveness of facilitated electric stimulation on two alternating patterns on lower extremity pelvic tilts in hemiplegic stroke patients

Public title

Comparing the effectiveness of facilitated electric stimulation on two alternating patterns on lower extremity pelvic tilts in hemiplegic stroke patients

Purpose

Education/Guidance

Inclusion/Exclusion criteria

Inclusion criteria:

All men and women will be included in study. Hemiplegic stroke patients will be included in study. Age between 45 to60 years old will be included in study. Patient with static and dynamic sitting balance will be included. Patients with static standing balance will be included in this study. Patients with peripheral or orthopaedic neuropathy, substantial vision field defects, or hemi neglect issues were not included.

Exclusion criteria:

All patients had imaging tests, such as brain computed tomography (CT) or magnetic resonance imaging (MRI), to determine their diagnosis for stroke during the acute stage. People who frequently have strokes. People who have cerebellar, brain stem, or bilateral hemisphere lesions. People who suffer from severe spasticity or cognitive impairment.

Age

From **45 years** old to **60 years** old

Gender

Both

Phase

1-2

Groups that have been masked

- Participant
- Data analyser

Sample size

Target sample size: **24**

Actual sample size reached: **20**

Randomization (investigator's opinion)

Randomized

Randomization description

Tools used in randomization is sealed envelops. Group A and Group B allocation is done by picking the sealed envelope by the patients randomly. Each envelope contained either group A designation or group B designation. So the patients were allocated accordingly in each group.

Blinding (investigator's opinion)

Double blinded

Blinding description

participant and data analyzer

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

The University of Faisalabad

Street address

house # 43, university villas, Ismail road, faisalabad

City

Faisalabad

Postal code

38000

Approval date

2023-02-03, 1401/11/14

Ethics committee reference number

TUF/Addl Reg/SB/387

Health conditions studied

1

Description of health condition studied

Hemiplegic Stroke

ICD-10 code

I69.959

ICD-10 code description

Hemiplegia and hemiparesis, unspecified cerebrovascular disease affecting unspecified side

Primary outcomes

1

Description

Pelvic tilt

Timepoint

before intervention and eight weeks after intervention

Method of measurement

inclinometer

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Abdominals cross Hamstrings and additional conventional exercises 3 days per week with 30 minutes. Additional conventional exercises will

include lower limb joint mobilizations(including hips, knees, ankles and feet), stretching of lower extremity, and ROMS

Category

Rehabilitation

2

Description

Intervention group: Lower back cross Quads and additional conventional exercises 3 days per week with 30 minutes stimulation each session. Additional conventional exercises will include lower limb joint mobilizations (including hips, knees, ankles and feet), stretching of lower extremity, and ROMS.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Allied Hospital, Faisalabad

Full name of responsible person
Dr. Maria

Street address
Allied hospital, Jail road, Faisalabad

City
Faisalabad

Postal code
38000

Phone
+92 41 9210082

Email
mariahussain@gmail.com

Web page address

2

Recruitment center

Name of recruitment center
Maqsooda zia hospital, Faisalabad

Full name of responsible person
Kinza Idrees

Street address
Main Sargodha Rd, near Allied hospital, opposite Crescent Textile Mills., Afshan Colony, Faisalabad, Punjab

City
Faisalabad

Postal code
38000

Phone
+92 41 87851367

Email
idreeskinza35@gmail.com

Web page address

3

Recruitment center

Name of recruitment center
Sahil hospital, Faisalabad

Full name of responsible person
Ali Husnain

Street address
Lahore - Sheikhupura - Faisalabad Road, 1 Sheikhupura Rd, Faisalabad

City
Faisalabad

Postal code
38000

Phone
+92 41 8782041

Email
alihusnain131@gmail.com

Web page address

4

Recruitment center

Name of recruitment center
Aziz Fatima hospital, Faisalabad

Full name of responsible person
Basit Mehmood

Street address
Raja Road, Lahore - Sheikhupura - Faisalabad Rd, Gulistan Colony Faisalabad, Punjab

City
Faisalabad

Postal code
38000

Phone
+92 41 8780910

Email
basitmehmood23@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
The university of Faisalabad

Full name of responsible person
Moater Iftikhar

Street address
house # 43, university villas, Ismail road, faisalabad

City
Faisalabad

Postal code
38000

Phone
+92 301 6085203

Email
moaterhassankazmi@gmail.com

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source
The university of Faisalabad
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Persons

Person responsible for general inquiries

Contact
Name of organization / entity
The university of Faisalabad
Full name of responsible person
Mariam Zafar
Position
Assistant Professor
Latest degree
Master
Other areas of specialty/work
Physiotherapy
Street address
University of Faisalabad, canal road campus, Faisalabad
City
Faisalabad
Province
Punjab
Postal code
38000
Phone
+92 300 4561972
Email
marium.zafar@tuf.edu.pk

Person responsible for scientific inquiries

Contact
Name of organization / entity
The university of Faisalabad
Full name of responsible person
Mariam Zafar
Position
Assistant Professor
Latest degree
Master
Other areas of specialty/work
Physiotherapy
Street address
University of Faisalabad, canal road campus, Faisalabad
City
Faisalabad
Province
Punjab
Postal code
38000
Phone
+92 300 4561972
Email
marium.zafar@tuf.edu.pk

Person responsible for updating data

Contact
Name of organization / entity
The university of Faisalabad
Full name of responsible person
Moater Iftikhar
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiotherapy
Street address
house # 43, university villas, Ismail road, faisalabad
City
Faisalabad
Province
Punjab
Postal code
38000
Phone
+92 41 2409608
Email
moaterhassankazmi@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
For concealing participants identity
Study Protocol
Yes - There is a plan to make this available
Statistical Analysis Plan
Yes - There is a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
Not applicable
Analytic Code
No - There is not a plan to make this available
Data Dictionary
Not applicable
Title and more details about the data/document
Comparing the effectiveness of facilitated electric stimulation of two alternating patterns on pelvic tilt in hemiplegic Stroke patients
When the data will become available and for how long
From 20 September, 2023
To whom data/document is available
Only to academic persons
Under which criteria data/document could be used
If the person have valid affiliation from recognized

institute

From where data/document is obtainable

moaterhassankazmi@gmail.com

What processes are involved for a request to access data/document

Inquirer must provide the cover letter stating the reason to obtain data and $5

Comments